



**North
Atlantic**

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The Northeast Utilities System

October 17, 2002
Docket No. 50-443
NYN-02067

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555-0001

Seabrook Station

Correction to Annual Radioactive Effluent Release Report Letters

In a letter dated April 30, 2002 (NYN-02043), North Atlantic Energy Service Corporation (North Atlantic) submitted the Annual Radioactive Effluent Release Report. A subsequent North Atlantic review of the calculation supporting the letter identified a minor error in Enclosure 3, Radiation Dose Assessment, Page 8, Table A, "Maximum Offsite Doses and Dose Commitments to Members of the Public." Enclosure 1 provides a copy of the originally submitted pages with the incorrect information annotated. Revised pages are provided in Enclosure 2.

In letters dated April 27, 2000 (NYN-00037), April 27, 2001 (NYN-01038), and April 30, 2002 (NYN-02043), North Atlantic submitted the Annual Radioactive Effluent Release Reports for the years 1999, 2000, and 2001. During a quality assurance audit, it was determined that material shipped to a waste processing vendor and subsequently disposed of at a licensed burial site was not reported in Enclosure 1, "Effluent Release Data as Required by Regulatory Guide 1.21," Table 3, "Effluent and Waste Disposal Annual Report ... Solid Waste and Irradiated Fuel Shipments." Enclosure 3 provides a copy of the originally submitted pages with the changed information annotated. Revised pages are provided in Enclosure 4.

Should you require further information regarding this matter, please contact Mr. Peter J. Harvey, Manager – Chemistry Department at (603) 773-7320.

Very truly yours,

NORTH ATLANTIC ENERGY SERVICE CORP.



Gene F. St. Pierre
Station Director

TE48

cc: H. J. Miller, NRC Region I Administrator
R. D. Starkey, NRC Project Manager, Project Directorate I-2
G. T. Dentel, NRC Senior Resident Inspector

ENCLOSURE 1 TO NYN-02067

In CORRECT
Information

Table A

Seabrook Station
2001 Annual Radioactive Effluent Release Report

Maximum^(a) Off-Site Doses and Dose Commitments to Members of the Public

Release Type	Dose (mrem) ^(b)					Year ^(c)
	1 st Quarter	2nd Quarter	3rd Quarter	4th Quarter		
Liquid Effluents:						
Total Body Dose	1.51E-04 (1)	4.28E-05 (2)	4.22E-05 (1)	8.45E-05 (1)	3.21E-04	
Organ Dose	6.11E-04 (3)	1.88E-04 (3)	1.62E-04 (3)	2.50E-04 (4)	1.21E-03	
Airborne Effluents:						
Organ Dose from Iodines, Tritium, and Particulates	6.13E-03 (5)	6.56E-03 (5)	3.66E-03 (6)	2.66E-03 (7)	1.90E-02	
Noble Gases	Beta Air (mrad)	6.90E-05 (8)	1.07E-05 (9)	1.05E-03 (10)	4.85E-04 (11)	1.61E-03
	Gamma Air (mrad)	1.15E-04 (12)	1.46E-05 (10)	4.27E-04 (10)	1.84E-04 (11)	7.41E-04
Doses (mrem) at Receptor Locations Inside Site Boundary ^(d) :						
Science and Nature Center (SW, 488m):	5.18E-06 (d1)	5.26E-06 (d1)	2.18E-06 (d1)	1.69E-06 (d1)	1.43E-05	
The "Rocks" (NE/ENE, 244m):	1.32E-04 (d1)	1.30E-04 (d1)	1.77E-04 (d1)	1.73E-04 (d1)	6.12E-04	
Direct Dose From Plant Operation ^(e)						0

Table B
Seabrook Station
2001 Annual Radioactive Effluent Release Report

Incorrect
Information

Total Dose to Maximum Off-Site Individual
(40CFR190)

Release Source	Total Body (mrem)	Maximum Organ ^(a) (mrem)
Liquids	3.21E-04	1.21E-03
Noble Gases	4.54E-04	4.54E-04
Gas Iodines, Tritium & Particulates	1.90E-02	1.90E-02
Direct Radiation	0.00E+00	0.00E+00
Annual Total	1.98E-02	2.07E-02

(a) Maximum organ includes consideration of the thyroid.

Table C
Seabrook Station
2001 Annual Radioactive Effluent Release Report

Incorrect
Information

Calculated 2001 Maximum Doses Versus Applicable Limits

Receptor	Applicable ODCM Control	ODCM Annual Limit	Calculated Annual (2001) Dose	Percent of Limit
Offsite				
Liquid Effluents				
Whole Body Dose	C.6.2.1.b	3 mrem	3.21e-04 mrem	0.01%
Organ Dose	C.6.2.1.b	10 mrem	1.21e-03 mrem	0.01%
Airborne Effluents				
Organ Dose (iodines, tritium, and part.)	C.7.3.1.b	15 mrem	1.90e-02 mrem	0.13%
Gamma Air Dose (noble gases)	C.7.2.1.b	10 mrad	7.41e-04 mrad	0.007%
Beta Air Dose (noble gases)	C.7.2.1.b	20 mrad	1.61e-03 mrad	0.008%
All Plant Sources (a)				
Whole Body Dose	C.8.1.1	25 mrem	1.98e-02 mrem	0.08%
Organ Dose	C.8.1.1	25 mrem	2.07e-02 mrem	0.08%
Onsite (Science and Nature Center, 488m SW)				
Airborne Effluents				
Organ Dose (iodines, tritium, and part.)	C.7.3.1.b(b)	15 mrem	1.43e-05 mrem	0.0001%
Onsite (The "Rocks", 244m NE/ENE)				
Airborne Effluents				
Organ Dose (iodines, tritium, and part.)	C.7.3.1.b(b)	15 mrem	6.12e-04 mrem	0.004%

- (a) The "all plant sources" doses are the sum of the whole body doses and maximum organ doses from liquid, noble gas, and iodines/tritium/particulate releases as well as direct radiation from fixed station sources.
- (b) ODCM Part A, Section 10.2 states that the annual effluent report shall include an assessment of the radiation doses from radioactive liquids and gaseous effluents to members of the public due to their activities inside the site boundary during the report period. The referenced limits (C.7.2.1.b & C.7.3.1.b) are the acceptable doses from liquid and gaseous effluents to areas at and beyond the site boundary and are considered to be appropriate for comparison purposes.

ENCLOSURE 2 TO NYN-02067

Table A

Seabrook Station
2001 Annual Radioactive Effluent Release Report

Maximum^(a) Off-Site Doses and Dose Commitments to Members of the Public

Release Type	Dose (mrem) ^(b)					Year ^(c)
	1 st Quarter	2nd Quarter	3rd Quarter	4th Quarter		
Liquid Effluents:						
Total Body Dose	1.51E-04 (1)	4.28E-05 (2)	4.22E-05 (1)	8.45E-05 (1)	3.21E-04	
Organ Dose	6.11E-04 (3)	1.88E-04 (3)	1.98E-04 (4)	2.50E-04 (4)	1.25E-03	
Airborne Effluents:						
Organ Dose from Iodines, Tritium, and Particulates	6.13E-03 (5)	6.56E-03 (5)	3.66E-03 (6)	2.66E-03 (7)	1.90E-02	
Noble Gases	Beta Air (mrad)	6.90E-05 (8)	1.07E-05 (9)	1.05E-03 (10)	4.85E-04 (11)	1.61E-03
	Gamma Air (mrad)	1.15E-04 (12)	1.46E-05 (10)	4.27E-04 (10)	1.84E-04 (11)	7.41E-04
Doses (mrem) at Receptor Locations Inside Site Boundary ^(d) :						
Science and Nature Center (SW, 488m):	5.18E-06 (d1)	5.26E-06 (d1)	2.18E-06 (d1)	1.69E-06 (d1)	1.43E-05	
Organ Dose (mrem)						
The "Rocks" (NE/ENE, 244m):	1.32E-04 (d1)	1.30E-04 (d1)	1.77E-04 (d1)	1.73E-04 (d1)	6.12E-04	
Organ Dose (mrem)						
Direct Dose From Plant Operation ^(e)						0

Table B

Seabrook Station
2001 Annual Radioactive Effluent Release Report

Total Dose to Maximum Off-Site Individual
(40CFR190)

Release Source	Total Body (mrem)	Maximum Organ ^(a) (mrem)
Liquids	3.21E-04	1.25E-03
Noble Gases	4.54E-04	4.54e-04
Gas Iodines, Tritium & Particulates	1.90E-02	1.90E-02
Direct Radiation	0.00E+00	0.00E+00
Annual Total	1.98e-02	2.07e-02

(a) Maximum organ includes consideration of the thyroid.

Table C

Seabrook Station
2001 Annual Radioactive Effluent Release Report

Calculated 2001 Maximum Doses Versus Applicable Limits

Receptor	Applicable ODCM Control	ODCM Annual Limit	Calculated Annual (2001) Dose		Percent of Limit
Offsite					
Liquid Effluents					
Whole Body Dose	C.6.2.1.b	3 mrem	3.21e-04	mrem	0.01%
Organ Dose	C.6.2.1.b	10 mrem	1.25e-03	mrem	0.01%
Airborne Effluents					
Organ Dose (iodines, tritium, and part.)	C.7.3.1.b	15 mrem	1.90e-02	mrem	0.13%
Gamma Air Dose (noble gases)	C.7.2.1.b	10 mrad	7.41e-04	mrad	0.007%
Beta Air Dose (noble gases)	C.7.2.1.b	20 mrad	1.61e-03	mrad	0.008%
All Plant Sources (a)					
Whole Body Dose	C.8.1.1	25 mrem	1.98e-02	mrem	0.08%
Organ Dose	C.8.1.1	25 mrem	2.07e-02	mrem	0.08%
Onsite (Science and Nature Center, 488m SW)					
Airborne Effluents					
Organ Dose (iodines, tritium, and part.)	C.7.3.1.b(b)	15 mrem	1.43e-05	mrem	0.0001%
Onsite (The "Rocks", 244m NE/ENE)					
Airborne Effluents					
Organ Dose (iodines, tritium, and part.)	C.7.3.1.b(b)	15 mrem	6.12e-04	mrem	0.004%

(a) The "all plant sources" doses are the sum of the whole body doses and maximum organ doses from liquid, noble gas, and iodines/tritium/particulate releases as well as direct radiation from fixed station sources.

(b) ODCM Part A, Section 10.2 states that the annual effluent report shall include an assessment of the radiation doses from radioactive liquids and gaseous effluents to members of the public due to their activities inside the site boundary during the report period. The referenced limits (C.7.2.1.b & C.7.3.1.b) are the acceptable doses from liquid and gaseous effluents to areas at and beyond the site boundary and are considered to be appropriate for comparison purposes.

ENCLOSURE 3 TO NYN-02067

TABLE 3
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT 1999
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

Corrected
Format

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not Irradiated Fuel)

1. Type of waste (no shipment made)	Unit	Est. total error %
a. Spent resins, filter sludges, evaporator bottoms, etc.	23.3 m ³ 82.1 Ci	2.00 E+01
b. Dry compressible waste, contaminated equip., etc.	0 m ³ 0 Ci	NA
c. Irradiated components, control rods, etc.	0 m ³ 0 Ci	NA
d. Other (describe) Dewatered Cartridge Filters	4.72 m ³ 65.3 Ci	2.88 E+01

2. Estimate of major nuclide composition (by type of waste)

a. deleted information	Nuclide	%	Ci	deleted information
	H-3	0.84	6.93E-01	
	Mn-54	0.10	8.28E-02	
	Fe-55	6.00	4.93E+00	
	Co-57	0.04	3.64E-02	
	Co-58	4.95E-03	4.06E-03	
	Co-60	5.76	4.73E+00	
	Ni-63	86.84	7.13E+01	
	Sb-125	0.09	7.34E-02	
	Cs-134	0.12	9.89E-02	
	Cs-137	0.19	1.59E-01	
	Zr-95	6.54E-07	5.37E-07	
	Nb-95	1.89E-08	1.55E-08	

Corrected
Format

b.

<u>Nuclide</u>	<u>%</u>	<u>Ci</u>
NA	NA	NA

c.

NA	NA	NA
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d.

<u>H-3</u>	<u>0.01</u>	<u>4.19E-03</u>
<u>Cr-51</u>	<u>0.07</u>	<u>4.73E-02</u>
<u>Mn-54</u>	<u>0.62</u>	<u>4.04E-01</u>
<u>Fe-55</u>	<u>64.76</u>	<u>4.23E+01</u>
<u>Fe-59</u>	<u>2.77E-03</u>	<u>1.81E-03</u>
<u>Co-57</u>	<u>0.05</u>	<u>3.54E-02</u>
<u>Co-58</u>	<u>1.01</u>	<u>6.57E-01</u>
<u>Co-60</u>	<u>12.77</u>	<u>8.34E+00</u>
<u>Ni-63</u>	<u>18.29</u>	<u>1.20E+01</u>
<u>Zr-95</u>	<u>0.05</u>	<u>3.13E-02</u>
<u>Nb-95</u>	<u>0.03</u>	<u>1.68E-02</u>
<u>Ag-110m</u>	<u>1.86E-03</u>	<u>1.21E-03</u>
<u>Sn-113</u>	<u>0.01</u>	<u>9.14E-03</u>
<u>Sb-125</u>	<u>0.01</u>	<u>6.54E-03</u>
<u>Cs-134</u>	<u>0.02</u>	<u>1.43E-02</u>
<u>Cs-137</u>	<u>2.30</u>	<u>1.50E+00</u>

3. Solid Waste Disposition

<u>Number of shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
6	Flatbed Truck	Chem Nuclear – Barnwell, S.C.

B. IRRADIATED FUEL SHIPMENTS (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
0	NA	NA

Corrected Data

Missing Information Provided

TABLE 3
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT 2000
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not irradiated fuel)

1. Type of waste	Unit	Est. Total Error, %
a. Spent resins, filter sludges, evaporator Bottoms, etc.	21.9 m ³ 403.2 Ci	2.00E+01
b. Dry compressible waste, contaminated Equip, etc.	0 m ³ 0 Ci	NA
c. Irradiated components, control Rods, etc.	0 m ³ 0 Ci	NA
d. Other (describe)	0 m ³ 0 Ci	NA

2. Estimate of major nuclide composition (by waste type)

a.	Nuclide	%	Ci
	H-3	0.08	3.27E-01
	C-14	0.04	1.55E-01
	Mn-54	1.31	5.28E+00
	Fe-55	11.92	4.81E+01
	Co-57	0.08	3.19E-01
	Co-58	0.11	4.31E-01
	Co-60	11.53	4.65E+01
	Ni-59	0.12	5.01E-01
	Ni-63	68.33	2.76E+02
	Sr-89	1.16E-04	4.68E-04
	Sr-90	0.02	6.37E-02
	Sb-125	0.18	7.13E-01
	Cs-134	.1.88	7.58E+00
	Cs-137	3.94	1.59E+01
	Ce-144	0.46	1.87E+00
	Pu-238	6.09E-05	2.46E-04
	Pu-239	4.40E-05	1.78E-04
	Pu-241	4.02E-03	1.62E-02
	Am-241	1.84E-05	7.41E-05
	Cm-242	6.72E-06	2.71E-05
	Cm-243	2.94E-03	1.19E-02
b.	NA	NA	NA
c.	NA	NA	NA
d.	NA	NA	NA

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
5	Flatbed Truck	Chem-Nuclear Barnwell, SC

B. IRRADIATED FUEL SHIPMENTS (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
NA	NA	NA

Corrected Format
and In accurate Information
provided for Type a and
b waste.

Corrected Format and
updated Values

Missing Information
Provided

EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT 2001
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not irradiated fuel)

1. Type of waste	Unit	Est. Total Error, %
a. Spent resins, filter sludges, evaporator Bottoms, etc.	6.81 m ³ 77.6 Ci	2.00E+01
b. Dry compressible waste, contaminated Equip, etc.	25.28 m ³ 5.0 Ci	2.50E+01
c. Irradiated components, control Rods, etc.	0 m ³ 0 Ci	NA
d. Other (describe): Dewatered Cartridge Filters	7.09 m ³ 122.8 Ci	2.88E+01

2. Estimate of major nuclide composition (by waste type)

	<u>Nuclide</u>	<u>%</u>	<u>Ci</u>
a.	H-3	6.77E-02	5.25E-02
	C-14	1.25E-02	9.70E-03
	Mn-54	1.96E+00	1.52E+00
	Fe-55	1.76E+00	1.37E+00
	Co-57	8.62E-02	6.69E-02
	Co-58	6.19E-02	4.80E-02
	Co-60	9.56E+00	7.42E+00
	Ni-59	4.15E-01	3.22E-01
	Ni-63	6.94E+01	5.38E+01
	Sr-89	3.43E-05	2.66E-05
	Sr-90	2.36E-02	1.83E-02
	Sb-125	3.18E-01	2.47E-01
	Cs-134	4.58E+00	3.55E+00
	Cs-137	1.12E+01	8.69E+00
	Ce-144	5.88E-01	4.56E-01
	Pu-238	4.59E-05	3.56E-05
	Pu-239	2.37E-05	1.84E-05
	Pu-241	2.86E-03	2.22E-03
	Am-241	1.23E-05	9.56E-06
	Cm-242	4.13E-06	3.20E-06
	Cm-243	1.54E-05	1.19E-05
b.	<u>Nuclide</u>	<u>%</u>	<u>Ci</u>
	Cr-51	7.75E-34	3.87E-35
	Mn-54	3.64E-01	1.82E-02
	Fe-55	2.12E+01	1.06E+00
	Fe-59	1.83E-21	9.13E-23
	Co-57	2.35E-02	1.17E-03
	Co-58	4.26E-01	2.13E-02
	Co-60	4.27E+00	2.13E-01
	Ni-63	7.09E+01	3.54E+00
	Zr-95	3.10E-02	1.55E-03
	Nb-95	2.68E-02	1.34E-03
	Sn-113	1.06E-02	5.29E-04
	Sb-125	2.67E-01	1.34E-02
	Cs-137	1.83E+00	9.15E-02
	Cs-134	6.82E-01	3.41E-02
	Ag-110m	1.47E-03	7.35E-05
c.	NA	NA	NA

Corrected Format and Inaccurate Information provided for Type a and b waste.

Corrected format and updated values.

d.	<u>Nuclide</u>	<u>%</u>	<u>Ci</u>
	H-3	5.43E-01	6.66E-01
	Cr-51	3.63E-04	4.46E-04
	Mn-54	1.13E+00	1.39E+00
	Fe-55	6.07E+01	7.46E+01
	Fe-59	1.40E-04	1.72E-04
	Co-57	9.60E-02	1.18E-01
	Co-58	4.17E-01	5.12E-01
	Co-60	1.11E+01	1.36E+01
	Ni-63	2.51E+01	3.08E+01
	Zr-95	1.20E-02	1.47E-02
	Nb-95	9.13E-05	1.12E-04
	Sn-113	1.41E-03	1.74E-03
	Sb-125	1.43E-01	1.75E-01
	Cs-137	7.85E-01	9.63E-01

Corrected
Format and
updated values.

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
7	Truck Truck	Chem-Nuclear Barnwell, SC Duratek, Oak Ridge, TN

Inaccurate Information

B. IRRADIATED FUEL SHIPMENTS (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
NA	NA	NA

ENCLOSURE 4 TO NYN-02067

TABLE 3
**EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT 1999
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS (Rev.01)**
A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not irradiated fuel)

1. Type of waste	Unit	1 year Period	Est. Total Error, %
a. Spent resins, filter sludges, evaporator Bottoms, etc.	m ³ Ci	2.33E+01 8.21E+01	2.00E+01
b. Dry compressible waste, contaminated Equip, etc.	m ³ Ci	NA	NA
c. Irradiated components, control Rods, etc.	m ³ Ci	NA	NA
d. Other (describe) Dewatered Cartridge Filters	m ³ Ci	4.72E+00 6.53E+01	2.88E+01

2. Estimate of major nuclide composition (by type of waste)

a.	H-3	%	8.40E-01
	Mn-54	%	1.00E-01
	Fe-55	%	6.00E+00
	Co-57	%	4.00E-02
	Co-58	%	4.95E-03
	Co-60	%	5.76E+00
	Ni-63	%	8.68E+01
	Sb-125	%	9.00E-02
	Cs-134	%	1.20E-01
	Cs-137	%	1.90E-01
	Zr-95	%	6.54E-07
	Nb-95	%	1.89E-08
b.		%	
		%	
c.		%	
d.	H-3	%	1.00E-02
	Cr-51	%	7.00E-02
	Mn-54	%	6.20E-01
	Fe-55	%	6.48E+01
	Fe-59	%	2.77E-03
	Co-57	%	5.00E-02
	Co-58	%	1.01E+00
	Co-60	%	1.28E+01
	Ni-63	%	1.83E+01
	Zr-95	%	5.00E-02
	Nb-95	%	3.00E-02
	Ag-110m	%	1.86E-03
	Sn-113	%	1.00E-02
	Sb-125	%	1.00E-02
	Cs-134	%	2.00E-02
	Cs-137	%	2.30E+00

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
6	Flatbed Truck	Chem-Nuclear Barnwell, SC
15	Flatbed Truck	GTS Duratek Oak Ridge, TN
1	Flatbed Truck	GTS Duratek Kingston, TN

B. IRRADIATED FUEL SHIPMENTS (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
NA	NA	NA

TABLE 3
EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT 2000
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS (Rev.01)

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not irradiated fuel)

1. Type of waste	Unit	1 year Period	Est. Total Error, %
a. Spent resins, filter sludges, evaporator Bottoms, etc.	m ³ Ci	4.00E+01 4.04E+02	2.88E+01
b. Dry compressible waste, contaminated Equip, etc.	m ³ Ci	1.78E+01 5.77E+00	2.88E+01
c. Irradiated components, control Rods, etc.	m ³ Ci	NA	NA
d. Other (describe):	m ³ Ci	NA	NA

2. Estimate of major nuclide composition (by type of waste)

a.	H-3	%	1.01E-01
	C-14	%	3.83E-02
	Mn-54	%	1.31E+00
	Fe-55	%	1.19E+01
	Co-57	%	7.89E-02
	Co-58	%	1.07E-01
	Co-60	%	1.15E+01
	Ni-59	%	1.24E-01
	Ni-63	%	6.83E+01
	Sr-89	%	1.16E-04
	Sr-90	%	1.58E-02
	Zr-95	%	2.09E-08
	Nb-95	%	3.88E-10
	Sb-125	%	1.77E-01
	Cs-134	%	1.88E+00
	Cs-137	%	3.94E+00
	Ce-144	%	4.64E-01
	Pu-238	%	6.08E-05
	Pu-239	%	4.40E-05
	Pu-241	%	4.01E-03
	Am-241	%	1.83E-05
	Cm-242	%	6.71E-06
	Cm-243	%	1.58E-05
b.	H-3	%	1.38E-02
	Cr-51	%	7.02E-05
	Mn-54	%	4.59E-02
	Fe-55	%	3.76E+00
	Fe-59	%	2.52E-04
	Co-57	%	3.71E-03
	Co-58	%	1.96E-01
	Co-60	%	9.40E-01
	Ni-63	%	9.18E+01

b.	Zn-65	%	5.38E-04
	Zr-95	%	1.28E-02
	Nb-95	%	5.21E-03
	Ag-110m	%	1.04E-03
	Sn-113	%	5.65E-03
	Sb-124	%	1.58E-04
	Sb-125	%	1.73E-02
	Cs-134	%	1.10E+00
	Cs-137	%	2.08E+00

c.	%	
	%	
	%	

d.	%	
	%	
	%	

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
5	Flatbed Truck	Chem-Nuclear Barnwell, SC
4	Truck	Duratek Oak Ridge, TN

B. IRRADIATED FUEL SHIPMENTS (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
NA	NA	NA

TABLE 3

**EFFLUENT AND WASTE DISPOSAL ANNUAL REPORT 2001
SOLID WASTE AND IRRADIATED FUEL SHIPMENTS (Rev.01)**

A. SOLID WASTE SHIPPED OFFSITE FOR BURIAL OR DISPOSAL (Not irradiated fuel)

1. Type of waste	Unit	1 year Period	Est. Total Error, %
a. Spent resins, filter sludges, evaporator Bottoms, etc.	m ³ Ci	1.85E+01 7.83E+01	2.88E+01
b. Dry compressible waste, contaminated Equip, etc.	m ³ Ci	3.01E+01 1.16E+01	2.88E+01
c. Irradiated components, control Rods, etc.	m ³ Ci	NA	NA
d. Other (describe): Spent cartridge filters	m ³ Ci	7.09E+00 1.23E+02	2.88E+01

2. Estimate of major nuclide composition (by type of waste)

a.	H-3	%	2.71E-01
	C-14	%	1.24E-02
	Mn-54	%	1.95E+00
	Fe-55	%	1.90E+00
	Co-57	%	8.55E-02
	Co-58	%	6.15E-02
	Co-60	%	9.51E+00
	Ni-59	%	4.11E-01
	Ni-63	%	6.92E+01
	Zr-95	%	6.09E-07
	Nb-95	%	1.13E-08
	Sr-89	%	3.40E-05
	Sr-90	%	2.34E-02
	Sb-125	%	3.18E-01
	Cs-134	%	4.54E+00
	Cs-137	%	1.11E+01
	Ce-144	%	5.83E-01
	Pu-238	%	4.55E-05
	Pu-239	%	2.35E-05
	Pu-241	%	2.84E-03
	Am-241	%	1.22E-05
	Cm-242	%	4.09E-06
	Cm-243	%	1.52E-05
b.	H-3	%	4.52E-02
	Cr-51	%	3.67E-24
	Mn-54	%	2.37E-01
	Fe-55	%	1.26E+01
	Fe-59	%	7.85E-22
	Co-57	%	2.12E-02
	Co-58	%	7.82E-01
	Co-60	%	2.43E+00
	Ni-63	%	8.10E+01

b.	Zr-95	%	5.20E-02
	Nb-95	%	2.48E-02
	Sn-113	%	2.26E-02
	Sb-125	%	1.15E-01
	Cs-137	%	1.91E+00
	Cs-134	%	8.16E-01
	Ag-10m	%	3.96E-03
c.		%	
		%	
d.	H-3	%	5.43E-01
	Cr-51	%	3.63E-04
	Mn-54	%	1.13E+00
	Fe-55	%	6.07E+01
	Fe-59	%	1.40E-04
	Co-57	%	9.60E-02
	Co-58	%	4.17E-01
	Co-60	%	1.11E+01
	Ni-63	%	2.51E+01
	Zr-95	%	1.20E-02
	Nb-95	%	9.13E-05
	Sn-113	%	1.41E-03
	Sb-125	%	1.43E-01
	Cs-137	%	7.85E-01

3. Solid Waste Disposition

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
7	Truck	Chem-Nuclear Barnwell, SC
2	Truck	Duratek Oak Ridge, TN

B. IRRADIATED FUEL SHIPMENTS (Disposition)

<u>Number of Shipments</u>	<u>Mode of Transportation</u>	<u>Destination</u>
NA	NA	NA